

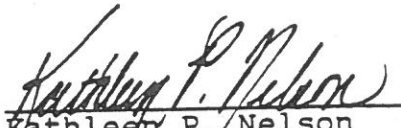
FINAL REPORT

U.S. Army Corps of Engineers
26 Federal Plate
NYC, NY 10274

E3I Project No. 930115
Client, Contract No. DACW51-92-D-0003
WAPPINGERS FALLS

Date: December 28, 1992

Prepared by:


Kathleen P. Nelson
Project Manager

Energy & Environmental Engineering, Inc.
35 Medford Street
Somerville, MA 02143

TABLE OF CONTENTS

- I. Introduction
- II. Analytical Methods
- III. Results
- IV. Quality Assurance Statement

I.

INTRODUCTION

This report summarizes results of analyses performed on samples received on 17 November 1992 by E3I from U. S. Army Corps of Engineers, Inc. Analytical Methods employed for these analyses are described in Section II, and the results are presented in Section III.

<u>CLIENT ID:</u>	<u>E3I ID:</u>	<u>SUBCONTRACTOR'S ID:</u>
WIPPINGER FALLS # 1	930115-1	24081
WIPPINGER FALLS # 2	930115-2	24082
WIPPINGER FALLS # 3	930115-3	24083
WIPPINGER FALLS # 4	930115-4	24084
WIPPINGER FALLS # 5	930115-5	24085
WIPPINGER FALLS # 6	930115-6	24086
WIPPINGER FALLS # 7	930115-7	24087
WIPPINGER FALLS # 8	930115-8	24088
WIPPINGER FALLS # 9	930115-9	24089
WIPPINGER FALLS # 10	930115-10	24090

II.

METHOD SUMMARY

Analyte(s)	Method No.	Description
Pesticides/PCBs	Mod 608/8080	Extraction, GC/ECD
Metals	7000/6010 /7471	GFAA/ICP/CVAA
Oil & Grease	9070	Gravimetric
Sulfate	4500-SO	Turbimetric

Reference:

Federal Register, Vol. 49, No. 209, 43234-43442, Friday, October 26, 1984

USEPA, Methods for Chemical Analysis of Water and Waste, EMSL Cincinnati, OH, EPA-600/4-79-020, 1983.

Test Methods for Evaluating Solid Waste, SW-846, 1986

Standard Methods for the Examination of Water and Wastewater, 17th Ed., A.P.H.A., 1989

III.

RESULTS

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client:	US ACOE	Date Received:	10/17/92
Client ID:	#1	Date Extracted:	10/30/92
Lab ID:	930115-1	Date Analyzed:	11/26/92
Sample Size:	0.030 Kg	Extract Volume :	10 mL
% Solid:	33 %	Dilution Factor:	1
GPC	Y		

CAS No.	COMPOUND	Concentration Units:	
		ug/Kg	Q
58-89-9	gamma-BHC	16	J
72-20-8	Endrin	48	
72-43-5	Methoxychlor	240	
57-74-9	Chlordane	490	

(Q) - Qualifiers:

U: Analyzed for but not detected
 B: Found in associated blank as well as sample
 J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client:	US ACOE	Date Received:	10/17/92
Client ID:	#1 MS	Date Extracted:	10/30/92
Lab ID:	930115-1 MS	Date Analyzed:	11/26/92
Sample Size:	0.030 Kg	Extract Volume :	10 mL
% Solid:	33 %	Dilution Factor:	1
GPC	Y		

Concentration Units:

CAS No.	COMPOUND	ug/Kg	Q
58-89-9	gamma-BHC	82	
72-20-8	Endrin	250	
72-43-5	Methoxychlor	240	U
57-74-9	Chlordane	490	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client:	US ACOE	Date Received:	10/17/92
Client ID:	#1 MSD	Date Extracted:	10/30/92
Lab ID:	930115-1 MSD	Date Analyzed:	11/26/92

Sample Size:	0.030 Kg	Extract Volume :	10 mL
% Solid:	33 %	Dilution Factor:	1
GPC	Y		

Concentration Units:

CAS No.	COMPOUND	ug/Kg	Q
58-89-9	gamma-BHC	32	
72-20-8	Endrin	98	
72-43-5	Methoxychlor	240	U
57-74-9	Clordane	490	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client:	US ACOE	Date Received:	10/17/92
Client ID:	#2	Date Extracted:	10/30/92
Lab ID:	930115-2	Date Analyzed:	11/26/92
Sample Size:	0.030 Kg	Extract Volume :	10 mL
% Solid:	15 %	Dilution Factor:	1
GPC	Y		

Concentration Units:

CAS No.	COMPOUND	ug/Kg	Q
58-89-9	gamma-BHC	28	J
72-20-8	Endrin	110	U
72-43-5	Methoxychlor	530	U
57-74-9	Chlordane	1100	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE Date Received: 10/17/92
Client ID: #3 Date Extracted: 10/30/92
Lab ID: 930115-3 Date Analyzed: 11/26/92

Sample Size: 0.030 Kg Extract Volume : 10 mL
% Solid: 19 % Dilution Factor: 1
GPC Y

Concentration Units:
ug/Kg

CAS No.	COMPOUND	Concentration Units: ug/Kg		Q
58-89-9	gamma-BHC	13		J
72-20-8	Endrin	84		U
72-43-5	Methoxychlor	420		U
57-74-9	Chlordane	840		U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client:	US ACOE	Date Received:	10/17/92
Client ID:	#4	Date Extracted:	10/30/92
Lab ID:	930115-4	Date Analyzed:	11/26/92

Sample Size:	0.030 Kg	Extract Volume :	10 mL
% Solid:	30 %	Dilution Factor:	1
GPC	Y		

Concentration Units:

CAS No.	COMPOUND	ug/Kg	Q
58-89-9	gamma-BHC	44	
72-20-8	Endrin	53	U
72-43-5	Methoxychlor	47	J
57-74-9	Chlordane	530	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE Date Received: 10/17/92
Client ID: #5 Date Extracted: 10/30/92
Lab ID: 930115-5 Date Analyzed: 11/26/92

Sample Size: 0.030 Kg Extract Volume : 10 mL
% Solid: 25 % Dilution Factor: 1
GPC Y

Concentration Units:
ug/Kg Q

CAS No.	COMPOUND	ug/Kg	Q
58-89-9	gamma-BHC	13	J
72-20-8	Endrin	64	U
72-43-5	Methoxychlor	320	U
57-74-9	Chlordane	640	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE Date Received: 10/17/92
Client ID: #6 Date Extracted: 10/30/92
Lab ID: 930115-6 Date Analyzed: 11/26/92

Sample Size: 0.030 Kg Extract Volume : 10 mL
% Solid: 22 % Dilution Factor: 1
GPC Y

Concentration Units:

CAS No.	COMPOUND	ug/Kg	Q
58-89-9	gamma-BHC	11	J
72-20-8	Endrin	73	U
72-43-5	Methoxychlor	360	U
57-74-9	Chlordane	730	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE Date Received: 10/17/92
Client ID: #7 Date Extracted: 10/30/92
Lab ID: 930115-7 Date Analyzed: 11/26/92

Sample Size: 0.030 Kg Extract Volume : 10 mL
% Solid: 44 % Dilution Factor: 1
GPC Y

Concentration Units:
ug/Kg

CAS No.	COMPOUND	Concentration Units: ug/Kg		Q
58-89-9	gamma-BHC	4.3		J
72-20-8	Endrin	36		U
72-43-5	Methoxychlor	180		U
57-74-9	Chlordane	360		U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE Date Received: 10/17/92
Client ID: #8 Date Extracted: 10/30/92
Lab ID: 930115-8 Date Analyzed: 11/26/92

Sample Size: 0.030 Kg Extract Volume : 10 mL
% Solid: 59 % Dilution Factor: 1
GPC Y

Concentration Units:
ug/Kg

CAS No.	COMPOUND	Q	
58-89-9	gamma-BHC	12	J U U U
72-20-8	Endrin	27	
72-43-5	Methoxychlor	140	
57-74-9	Chlordane	270	

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE
Client ID: #9
Lab ID: 930115-9

Date Received: 10/17/92
Date Extracted: 10/30/92
Date Analyzed: 11/26/92

Sample Size: 0.030 Kg
% Solid: 24 %
GPC Y

Extract Volume : 10 mL
Dilution Factor: 1

CAS No.	COMPOUND	Concentration Units:	
		ug/Kg	Q
58-89-9	gamma-BHC	22	J
72-20-8	Endrin	67	U
72-43-5	Methoxychlor	330	U
57-74-9	Chlordane	670	U

(Q) - Qualifiers:

- U: Analyzed for but not detected
- B: Found in associated blank as well as sample
- J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE Date Received: 10/17/92
Client ID: #10 Date Extracted: 10/30/92
Lab ID: 930115-10 Date Analyzed: 11/26/92

Sample Size: 0.030 Kg Extract Volume : 10 mL
% Solid: 21 % Dilution Factor: 1
GPC Y

Concentration Units:
ug/Kg

CAS No.	COMPOUND			Q
58-89-9	gamma-BHC	38		U
72-20-8	Endrin	76		U
72-43-5	Methoxychlor	380		U
57-74-9	Chlordane	760		U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE Date Received:
Client ID: PBLK15 Date Extracted: 10/30/92
Lab ID: S115 Date Analyzed: 11/26/92

Sample Size: 0.030 Kg Extract Volume : 10 mL
% Solid: 100 % Dilution Factor: 1
GPC Y

Concentration Units:
ug/Kg Q

CAS No.	COMPOUND	ug/Kg	Q
58-89-9	gamma-BHC	8.0	U
72-20-8	Endrin	16	U
72-43-5	Methoxychlor	80	U
57-74-9	Chlordane	160	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE
Client ID: S115MSB
Lab ID: S115MSB

Date Received:
Date Extracted: 10/30/92
Date Analyzed: 11/26/92

Sample Size: 0.030 Kg
% Solid: 100 %
GPC Y

Extract Volume : 10 mL
Dilution Factor: 1

CAS No.	COMPOUND	Concentration Units:	
		ug/Kg	Q
58-89-9	gamma-BHC	20	
72-20-8	Endrin	72	
72-43-5	Methoxychlor	80	U
57-74-9	Chlordane	160	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET
Method 8080

Client: US ACOE
Client ID: #1
Lab ID: 930115-1

Date Received: 10/17/92
Date Extracted: 10/30/92
Date Analyzed: 11/26/92

Sample Size: 0.030 Kg
% Solid: 33 %

Extract Volume : 10 mL
Dilution Factor: 1

CAS No.	COMPOUND	Concentration Units:	
		ug/Kg	Q
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	240	U
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	490	U
11096-82-5	Aroclor-1260	490	U

(Q) - Qualifiers:

U: Analyzed for but not detected
B: Found in associated blank as well as sample
J: Estimated value, below quantitation limit